

## ABSTRACT

A method for patterning a polished silicon surface is disclosed, the method including steps leading to an organic monolayer on at least a part of the silicon surface, the monolayer being functionalized in specific desired locations. The method can be used to produce a device comprising one or more FET structures, the gate of the FET being formed by the functionalized organic monolayer. The functionalized monolayer preferably contains oligosaccharides or oligopeptides which are capable of interacting with biological substance, such that the device acts as a bio-sensor.